# Quick Start Guide
# NX-3200 NetLinx Integrated Controller

## Overview

This guide pertains to the NX-3200 NetLinx Integrated Controller (**FG2106-03**). The purpose of this document is to illustrate how to set up the device in its simplest configuration. Additional documentation for this device is available at www.amx.com:

- Refer to the *NX-x200 Series Hardware Reference Guide* for additional details on installing, upgrading, and wiring the NX-3200.
- Refer to the *NX Series NetLinx Integrated Controllers WebConsole & Programming Guide* for detailed configuration instructions.

### What's in the Box?

The following items are included with the NX-3200:

- 1 2-pin 3.5 mm mini-Phoenix (female) PWR connector
- 1 4-pin 3.5 mm mini-Phoenix (female) AxLink connector
- 2 6-pin 3.5 mm mini-Phoenix (female) I/O connectors
- 2 8-pin 3.5 mm mini-Phoenix (female) Relay connectors
- 2 10-pin 3.5mm mini-Phoenix (female) RS232/422/485 connectors
- 6 5-pin 3.5mm mini-Phoenix (female) RS232 connectors
- 2 CC-NIRC, IR Emitters (**FG10-000-11**)
- 2 removable rack ears

## Power Supply

The suggested power supply for the NX-3200 is a 13.5 VDC 6.6 A output, suitable for 50° C.

## Environmental Requirements

The environmental requirements for the NX-3200 are as follows:

- **Operating Temperature**: 32° F (0° C) to 104° F (40° C)
- **Storage Temperature**: 4° F (-15° C) to 140° F (60° C)
- **Operating Humidity**: 5% to 85% RH

## Modes and Front Panel LED Blink Patterns

The following table lists the modes and blink patterns for the front panel LEDs associated with each mode. These patterns are not evident until after the unit is powered.

**Modes and LED Blink Patterns**

| Mode | LEDs and Blink Patterns | | |
|---|---|---|---|
| | **STATUS (green)** | **OUTPUT (red)** | **INPUT (yellow)** |
| Boot | ON | OFF | ON |
| Contacting DHCP server | ON | OFF | Fast Blink |
| Using link-local address | Slow Blink | OFF | OFF |
| Program running | Slow Blink | ON when transmitting data | ON when receiving data |
| No program running | ON | ON when transmitting data | ON when receiving data |

## Getting Connected

***Note:*** *Ensure the PC you are using to connect to the controller has the latest version of NetLinx Studio 4.0 installed on it.*

Once the controller is powered on, you can connect to it through its IP address.

***Note:*** *NX-Series controllers fully support IPv6 network addressing. If the LAN port is connected to an IPv6 capable network it will self select an appropriate IPv6 address based on the discovered address parameters of the network to which it's attached.*

### Connecting to the NX-3200 over Ethernet

The NX-3200 is configured for DHCP addressing by default. The controller uses link local addressing as a backup in case the DHCP server is inaccessible. See the *Changing the IP Address* section for information on setting a static IP address. Verify there is an active LAN connection on the controller's LAN port before beginning this procedure.

1. Using category cable, connect the LAN port on the rear panel of the controller to your external network.

FIG. 1 displays the location of the LAN port on the rear panel.

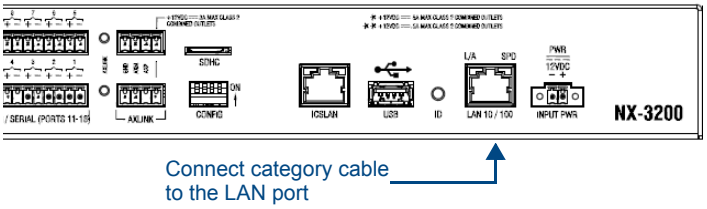


**FIG. 1** NX-3200 rear panel

2. In NetLinx Studio, select **Settings > Workspace Communications Settings** to open the Workspace Communication Settings dialog.
3. Click **System Settings** to open the Communication Settings dialog, and select the **Network** tab.
4. Click **Listen for Masters** to open the Listen For Masters dialog, and click **Start Listening** to begin listening for "blink" (UDP) messages from NetLinx Masters on the same subnet. As Masters are discovered, they are added to the List of Active NetLinx Master Controllers.
5. When you see the IP Address for the target Master in the List of Active NetLinx Master Controllers, click **Stop Listening**.
6. Select the IP Address of the target Master and click **Select to Add**. The New TCP/IP Setting dialog appears, indicating the selected IP address. Fill in the available fields as necessary. Click **OK** to save changes and return to the Communication Settings dialog. The new Master's IP address now appears in the List of Addresses.
7. With the newly added Master selected, click **Select**. The window updates to indicate that the newly added and selected Master is now the current communication configuration.
8. Click **OK** on each open dialog to exit and return to the workspace.
9. Refresh the Online Tree (select **Refresh System Online Tree** from the Online Tree context menu) to connect to the Master.

### Connected to the NX-3200 via USB

If you do not have a DHCP server or if the controller has an unknown static IP address, you obtain the IP address of the controller via USB.

1. Using a standard Type-B to Type-A USB cable, connect the Program Port on the front panel of the controller to your PC.

FIG. 2 displays the location of the Program Port.

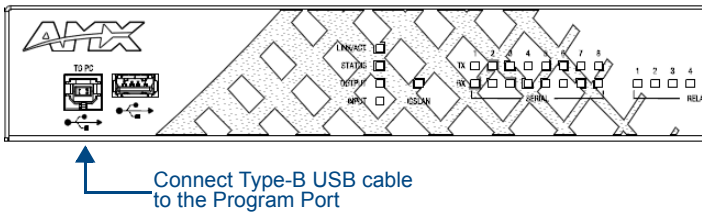


**FIG. 2** NX-3200 front panel

2. Select **Settings** > **Workspace Communications Settings** to open the Workspace Communication Settings dialog.
3. Click **System Settings** to open the Communication Settings dialog.
4. Select the USB tab. The USB tab features a list of Masters connected to your PC via USB. The IP address of the Master appears in the IPv4 Address column.
5. Highlight your Master and click **Select** to connect to it.

### Switching the IP Address from a Dynamic to Static

To toggle between static and dynamic IP addresses, hold the ID pushbutton on the front panel of the NX-3200 for 10 seconds. When complete, the controller automatically reboots itself. After the controller is fully booted, use the Workspace Communications Settings dialog in NetLinx Studio to create a new connection to the controller. See the *Default IP Addresses* section for the list of default IP addresses.

***Note:*** *Ensure the controller is fully booted when you press and hold the ID pushbutton. Pressing and holding the ID pushbutton while the controller is booting resets the unit to its factory defaults.*

### Changing the IP Address Once You Are Connected

Perform these steps to change the IP address once you are connected to the controller:

1. Set the IP address on your PC to the same network the controller is currently on.
2. In NetLinx Studio, select **Diagnostics > Network Addresses** from the menu bar to open the Network Addresses dialog.
3. Click **Get IP Information** to enable the fields for editing.
4. Enter the System, Device (0 for NetLinx Masters), and Host Name information.
5. To specify a network IP address, select **Specify IP Address**.
6. Enter the IP parameters into the available fields.
7. Click **Set IP Information** to retain the pre-reserved IP Address to the Master.
8. Click **Reboot Device** to finish assigning the IP address to the Master, and click **OK** to close the dialog.

### Accessing the WebConsole

NetLinx Masters have a built-in WebConsole that allows you to make various configuration settings via a web browser on any PC with access to the Master.

The WebConsole consists of a series of web pages that are collectively called the "Master Configuration Manager". Refer to the *NX Series NetLinx Integrated Controllers WebConsole & Programming Guide* for details on the WebConsole.

From any PC with access to the LAN that the target Master resides on:

1. Open a web browser and type the IP Address of the target Master in the Address Bar.
2. Press **Enter** to access WebConsole for the Master. The initial view is the WebControl page.

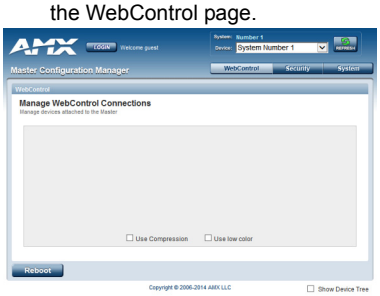


**FIG. 3** WebConsole (main page)

## Default Settings

The following sections list the default settings for the controller.

### Default User Names and Passwords

The following table lists the default user names and passwords for accessing the NX-3200 through NetLinx Studio or the WebConsole.

| Default User Names and Passwords | | |
|---|---|---|
| | **User Name** | **Password** |
| NetLinx Studio | netlinx | password |
| WebConsole | administrator | password |

### Default IP Addresses

The following table lists the default IP addresses for the NX-3200.

| Default IP Addresses | | |
|---|---|---|
| | **IP Address** | **Subnet** |
| Static IP | 192.168.1.3 | 255.255.255.0 |
| ICSLAN | 198.18.0.1 | 255.255.0.0 |
| Link-local | 169.254.x.y, where x and y are the least significant two octets of the MAC address. | |

## Configuration

All items in this section require accessing the WebConsole.

### Enabling Security

To enable security:

1. Select the **Security** tab on the WebConsole. The System Security Details appear.
2. Click the **Enabled** check box to enable security and activate the Access options.
3. Select the Access options which you want to require a login and password.
4. Configure users and groups as necessary.

### 802.1x Security

The X-Series controllers support 802.1X, an IEEE Standard for Port-based Network Access Control. To enable 802.1X, you must load an 802.1X certificate file to your controller using NetLinx Studio. Once you add the certificate file to your workspace, NetLinx Studio transfers the file to the appropriate directory on the controller.

1. Click to select (highlight) a System (in the Workspace tab of the Workspace Bar).
2. Right-click on the **Other** folder to access the Other File Folder context menu, and select **Add Existing Other File**.
3. In the Add Existing Other File dialog, locate and select the certificate file (.crt) that you want to add to the selected System. Change the Files of Type option to All Files (*.*) to look for other file types, if necessary.
4. Click **Open** to access the File Properties dialog, where you can view/edit general file information for the selected file.
5. Click **OK** to add the file to the selected System. The file should now appear in the Other folder under the selected System.

### Setting the Clock Manager Mode

To set the clock manager mode:

1. On the Manage System tab, select a Time Sync option.
   - Network Time: When this option is selected, the Master will connect to the default NIST Server to get date and time information. You can select a different NIST Server (or specify the IP Address of a known NIST Server) on the *NIST Servers* tab.
   - Stand Alone: This option lets the Master use its own internal clock. When this option is selected, the Date and Time fields are available on this tab.
2. Click **Accept** to save these settings to the Master.

## Hardware Information

This section lists important hardware information for the NX-3200.

### Port Numbers

| NX-3200 Port Numbers | | | | |
|---|---|---|---|---|
| **RS-232** | **RS-422/485** | **IR/Serial** | **I/O** | **Relay** |
| 2-4, 6-8 | 1, 5 | 11-18 | 22 | 21 |

### Mounting the NX-3200

The NX-3200 ships with removable rack ears for installation into an equipment rack. Use the supplied #8-32 screws to secure the rack ears to the sides of the controller. You can attach the rack ears toward the front or rear panel for either a front-facing or rear-facing installation.

Use the four #10-32 screws supplied in the mounting kit to secure the controller to the rack.


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